

=====

Sequence Listing was accepted.

If you need help call the Patent Electronic Business Center at (866)
217-9197 (toll free).

Reviewer: Durreshwar Anjum

Timestamp: Mon Oct 29 15:12:34 EDT 2007

=====

Application No: 10589102 Version No: 1.0

Input Set:**Output Set:**

Started: 2007-10-11 14:34:01.906
Finished: 2007-10-11 14:34:04.172
Elapsed: 0 hr(s) 0 min(s) 2 sec(s) 266 ms
Total Warnings: 34
Total Errors: 0
No. of SeqIDs Defined: 34
Actual SeqID Count: 34

Error code	Error Description
W 213	Artificial or Unknown found in <213> in SEQ ID (1)
W 213	Artificial or Unknown found in <213> in SEQ ID (2)
W 213	Artificial or Unknown found in <213> in SEQ ID (3)
W 213	Artificial or Unknown found in <213> in SEQ ID (4)
W 213	Artificial or Unknown found in <213> in SEQ ID (5)
W 213	Artificial or Unknown found in <213> in SEQ ID (6)
W 213	Artificial or Unknown found in <213> in SEQ ID (7)
W 213	Artificial or Unknown found in <213> in SEQ ID (8)
W 213	Artificial or Unknown found in <213> in SEQ ID (9)
W 213	Artificial or Unknown found in <213> in SEQ ID (10)
W 213	Artificial or Unknown found in <213> in SEQ ID (11)
W 213	Artificial or Unknown found in <213> in SEQ ID (12)
W 213	Artificial or Unknown found in <213> in SEQ ID (13)
W 213	Artificial or Unknown found in <213> in SEQ ID (14)
W 213	Artificial or Unknown found in <213> in SEQ ID (15)
W 213	Artificial or Unknown found in <213> in SEQ ID (16)
W 213	Artificial or Unknown found in <213> in SEQ ID (17)
W 213	Artificial or Unknown found in <213> in SEQ ID (18)
W 213	Artificial or Unknown found in <213> in SEQ ID (19)
W 213	Artificial or Unknown found in <213> in SEQ ID (20)

Input Set:

Output Set:

Started: 2007-10-11 14:34:01.906
Finished: 2007-10-11 14:34:04.172
Elapsed: 0 hr(s) 0 min(s) 2 sec(s) 266 ms
Total Warnings: 34
Total Errors: 0
No. of SeqIDs Defined: 34
Actual SeqID Count: 34

Error code

Error Description

This error has occurred more than 20 times, will not be displayed

SEQUENCE LISTING

<110> Bio Clue & Solution Co., Ltd.
 Kim, Tae-Yoon
 Kim, Doo-Sik
 Kwon, Hyung-Joo
 Kim, Yang-Soon

<120> Therapeutic Use of CPG Oligonucleotide for Skin Disease

<130> HANOL-13046

<140> 10589102
 <141> 2007-10-11

<150> PCT/KR05/03717
 <151> 2005-11-04

<160> 34

<170> PatentIn version 3.4

<210> 1
 <211> 20
 <212> DNA
 <213> Artificial sequence

<220>
 <223> CpG ODN

<220>
 <221> misc_feature
 <222> (1)..(1)
 <223> s is g or c

<220>
 <221> misc_feature
 <222> (2)..(3)
 <223> y is c or t

<220>
 <221> misc_feature
 <222> (4)..(5)
 <223> s is g or c

<220>
 <221> misc_feature
 <222> (11)..(11)
 <223> s is g or c

<220>
 <221> misc_feature
 <222> (12)..(12)
 <223> n is a, c, g, or t

<220>
<221> misc_feature
<222> (13)..(13)
<223> y is c or t

<220>
<221> misc_feature
<222> (14)..(14)
<223> r is g or a

<220>
<221> misc_feature
<222> (16)..(16)
<223> w is a or t

<220>
<221> misc_feature
<222> (17)..(17)
<223> m is a or c

<220>
<221> misc_feature
<222> (18)..(18)
<223> y is c or t

<400> 1
syyssacgtt snyrawmytc

20

<210> 2
<211> 20
<212> DNA
<213> Artificial sequence

<220>
<223> oligo-4 CpG ODN

<400> 2
ctcgcacgtt gccgaacttc

20

<210> 3
<211> 20
<212> DNA
<213> Artificial sequence

<220>
<223> oligo 4-3 CpG ODN

<400> 3
ctcgcacgtt gctgaacttc

20

<210> 4
<211> 20
<212> DNA
<213> Artificial sequence

<220>
<223> oligo 4-4 CpG ODN

<400> 4
ctcgcacgtt gccaaacttc 20

<210> 5
<211> 20
<212> DNA
<213> Artificial sequence

<220>
<223> oligo 4-8 CpG ODN

<400> 5
ctcgcacgtt gacgaacttc 20

<210> 6
<211> 20
<212> DNA
<213> Artificial sequence

<220>
<223> oligo 4-9 CpG ODN

<400> 6
ctcgcacgtt gtcgaacttc 20

<210> 7
<211> 20
<212> DNA
<213> Artificial sequence

<220>
<223> oligo 4-10 CpG ODN

<400> 7
ctcgcacgtt cgcgaacttc 20

<210> 8
<211> 20
<212> DNA
<213> Artificial sequence

<220>
<223> oligo 4-11 CpG ODN

<400> 8
gctcgacgtt ggcgatactc 20

<210> 9

<211>	20	
<212>	DNA	
<213>	Artificial sequence	
<220>		
<223>	oligo 4-1 CpG ODN	
<400>	9	
	ctcgcacatt gccgaacttc	20
<210>	10	
<211>	20	
<212>	DNA	
<213>	Artificial sequence	
<220>		
<223>	oligo 4-2 CpG ODN	
<400>	10	
	ctcgcacttt gccgaacttc	20
<210>	11	
<211>	20	
<212>	DNA	
<213>	Artificial sequence	
<220>		
<223>	oligo 4-5 CpG ODN	
<400>	11	
	ctcgcacgaa gccgaacttc	20
<210>	12	
<211>	20	
<212>	DNA	
<213>	Artificial sequence	
<220>		
<223>	oligo 4-6 CpG ODN	
<400>	12	
	ctcgcacgcc gccgaacttc	20
<210>	13	
<211>	20	
<212>	DNA	
<213>	Artificial sequence	
<220>		
<223>	oligo 4-7 CpG ODN	
<400>	13	
	ctcgcacggg gccgaacttc	20

<210>	14	
<211>	27	
<212>	DNA	
<213>	Artificial sequence	
<220>		
<223>	forward primer for IL-8 promoter	
<400>	14	
	gtgagatctg aagtgtgatg actcagg	27
<210>	15	
<211>	27	
<212>	DNA	
<213>	Artificial sequence	
<220>		
<223>	reverse primer for IL-8 promoter	
<400>	15	
	gtgaagcttg aagcttgtgt gctctgc	27
<210>	16	
<211>	25	
<212>	DNA	
<213>	Artificial sequence	
<220>		
<223>	forward primer for IL-12 promoter	
<400>	16	
	catgagctca gcctcccgtc tgacc	25
<210>	17	
<211>	25	
<212>	DNA	
<213>	Artificial sequence	
<220>		
<223>	reverse primer for IL-12 promoter	
<400>	17	
	ctgggctcga gggagagtc aatgg	25
<210>	18	
<211>	20	
<212>	DNA	
<213>	Artificial sequence	
<220>		
<223>	O-type 1826 ODN	

<400> 18	
tccatgacgt tctgacgtt	20
<210> 19	
<211> 24	
<212> DNA	
<213> Artificial sequence	
<220>	
<223> O-type 2006 CpG ODN	
<400> 19	
tcgtcgtttt gtcgttttgt cgtt	24
<210> 20	
<211> 24	
<212> DNA	
<213> Artificial sequence	
<220>	
<223> S-type 2041 non-CpG ODN	
<400> 20	
ctggtctttc tggttttttt ctgg	24
<210> 21	
<211> 20	
<212> DNA	
<213> Artificial sequence	
<220>	
<223> forward primer for TNF-alpha	
<400> 21	
tctcatcagt tctatggccc	20
<210> 22	
<211> 20	
<212> DNA	
<213> Artificial sequence	
<220>	
<223> reverse primer for TNF-alpha	
<400> 22	
gggagtagac aaggtacaac	20
<210> 23	
<211> 22	
<212> DNA	
<213> Artificial sequence	

<220>
 <223> forward primer for MIP-2

 <400> 23
 tgggtgggat gtagctagtt cc 22

 <210> 24
 <211> 22
 <212> DNA
 <213> Artificial sequence

 <220>
 <223> reverse primer for MIP-2

 <400> 24
 agtttgcctt gaccctgaag cc 22

 <210> 25
 <211> 20
 <212> DNA
 <213> Artificial sequence

 <220>
 <223> forward primer for IL-1

 <400> 25
 ttgacggacc ccaaagatg 20

 <210> 26
 <211> 20
 <212> DNA
 <213> Artificial sequence

 <220>
 <223> reverse primer for IL-1

 <400> 26
 agaagtgct catgtcctca 20

 <210> 27
 <211> 20
 <212> DNA
 <213> Artificial sequence

 <220>
 <223> forward primer for IL-6

 <400> 27
 gttctctggg aaatcgtgga 20

 <210> 28

<211> 20
 <212> DNA
 <213> Artificial sequence

 <220>
 <223> reverse primer for IL-6

 <400> 28
 tgtactccag gtagctatgg 20

<210> 29
 <211> 20
 <212> DNA
 <213> Artificial sequence

 <220>
 <223> forward primer for IL-10

 <400> 29
 atgcaggact ttaagggtta 20

<210> 30
 <211> 28
 <212> DNA
 <213> Artificial sequence

 <220>
 <223> reverse primer for IL-10

 <400> 30
 atttcggaga gaggtagaaa cgaccttt 28

<210> 31
 <211> 26
 <212> DNA
 <213> Artificial sequence

 <220>
 <223> forward primer for GM-CSF

 <400> 31
 atgtggctgc agaatttact tttcct 26

<210> 32
 <211> 25
 <212> DNA
 <213> Artificial sequence

 <220>
 <223> reverse primer for GM-CSF

 <400> 32
 tgggcttcct catttttggc ctggt 25

<210> 33
<211> 19
<212> DNA
<213> Artificial sequence

<220>
<223> forward primer for IL-12

<400> 33
ctgggtgcaaa gaaacatgg 19

<210> 34
<211> 20
<212> DNA
<213> Artificial sequence

<220>
<223> reverse primer for IL-12

<400> 34
tggtttgatg atgtccctga 20